



ARIZONA STATE UNIVERSITY
GENERAL STUDIES COURSE PROPOSAL COVER FORM

Course information:

Copy and paste current course information from Class Search/Course Catalog.

Academic Unit Computing, Informatics, and Decision Systems Engineering Department Industrial Engineering/ Engineering Management

Subject IEE Number 486 Title Systems Design Capstone 2 Units: 3

Is this a cross-listed course?
If yes, please identify course(s)

Is this a shared course?
Course description:

This class, IEE 486, is the second of a two semester senior capstone project course; the first class is IEE 485. In IEE 486, students will execute the capstone project that they planned in IEE 485.

Requested designation: (Choose One)

Note- a separate proposal is required for each designation requested

Eligibility:

Permanent numbered courses must have completed the university's review and approval process.
For the rules governing approval of omnibus courses, contact the General Studies Program Office at (480) 965-0739.

Area(s) proposed course will serve:

A single course may be proposed for more than one core or awareness area. A course may satisfy a core area requirement and more than one awareness area requirements concurrently, but may not satisfy requirements in two core areas simultaneously, even if approved for those areas. With departmental consent, an approved General Studies course may be counted toward both the General Studies requirement and the major program of study.

Checklists for general studies designations:

Complete and attach the appropriate checklist

- Literacy and Critical Inquiry core courses (L)
- Mathematics core courses (MA)
- Computer/statistics/quantitative applications core courses (CS)
- Humanities, Fine Arts and Design core courses (HU)
- Social and Behavioral Sciences core courses (SB)
- Natural Sciences core courses (SQ/SG)
- Global Awareness courses (G)
- Historical Awareness courses (H)
- Cultural Diversity in the United States courses (C)

A complete proposal should include:

- Signed General Studies Program Course Proposal Cover Form
- Criteria Checklist for the area
- Course Syllabus
- Table of Contents from the textbook, and/or lists of course materials

Contact information:

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Mail code BYENG 324, BYENG208 E-mail: mary.anderson@asu.edu
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Department Chair/Director approval: (*Required*)

Chair/Director name (Typed): Ronald Askin/Esma Gel Date: 12/19/12

Chair/Director (Signature): Ronald S. Gel

Arizona State University Criteria Checklist for
LITERACY AND CRITICAL INQUIRY - [L]

Rationale and Objectives

Literacy is here defined broadly as communicative competence in written and oral discourse. **Critical inquiry** involves the gathering, interpretation, and evaluation of evidence. Any field of university study may require unique critical skills which have little to do with language in the usual sense (words), but the analysis of spoken and written evidence pervades university study and everyday life. Thus, the General Studies requirements assume that all undergraduates should develop the ability to reason critically and communicate using the medium of language.

The requirement in Literacy and Critical Inquiry presumes, first, that training in literacy and critical inquiry must be sustained beyond traditional First Year English in order to create a habitual skill in every student; and, second, that the skills become more expert, as well as more secure, as the student learns challenging subject matter. Thus, the Literacy and Critical Inquiry requirement stipulates two courses beyond First Year English.

Most lower-level [L] courses are devoted primarily to the further development of critical skills in reading, writing, listening, speaking, or analysis of discourse. Upper-division [L] courses generally are courses in a particular discipline into which writing and critical thinking have been fully integrated as means of learning the content and, in most cases, demonstrating that it has been learned.

Students must complete six credit hours from courses designated as [L], at least three credit hours of which must be chosen from approved upper-division courses, preferably in their major. Students must have completed ENG 101, 107, or 105 to take an [L] course.

Notes:

1. ENG 101, 107 or ENG 105 must be prerequisites
2. Honors theses, XXX 493 meet [L] requirements
3. The list of criteria that must be satisfied for designation as a Literacy and Critical Inquiry [L] course is presented on the following page. This list will help you determine whether the current version of your course meets all of these requirements. If you decide to apply, please attach a current syllabus, or handouts, or other documentation that will provide sufficient information for the General Studies Council to make an informed decision regarding the status of your proposal.

Proposer: Please complete the following section and attach appropriate documentation.

ASU - [L] CRITERIA																							
TO QUALIFY FOR [L] DESIGNATION, THE COURSE DESIGN MUST PLACE A MAJOR EMPHASIS ON COMPLETING CRITICAL DISCOURSE--AS EVIDENCED BY THE FOLLOWING CRITERIA:																							
YES	NO																						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 1: At least 50 percent of the grade in the course should depend upon writing, including prepared essays, speeches, or in-class essay examinations. <i>Group projects are acceptable only if each student gathers, interprets, and evaluates evidence, and prepares a summary report</i>																					
<p>1. Please describe the assignments that are considered in the computation of course grades--and indicate the proportion of the final grade that is determined by each assignment.</p> <p>2. Also:</p> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-1".</p>																							
<p>C-1</p> <table border="1"><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td>CRITERION 2: The composition tasks involve the gathering, interpretation, and evaluation of evidence</td><td>Course Syllabus</td></tr><tr><td colspan="4"><p>1. Please describe the way(s) in which this criterion is addressed in the course design</p><p>2. Also:</p><p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-2".</p></td></tr><tr><td colspan="4"><p>C-2</p><table border="1"><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td>CRITERION 3: The syllabus should include a minimum of two substantial writing or speaking tasks, other than or in addition to in-class essay exams</td><td>Course Syllabus</td></tr><tr><td colspan="4"><p>1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements</p><p>2. Also:</p><p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-3".</p></td></tr></table></td></tr></table>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 2: The composition tasks involve the gathering, interpretation, and evaluation of evidence	Course Syllabus	<p>1. Please describe the way(s) in which this criterion is addressed in the course design</p> <p>2. Also:</p> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-2".</p>				<p>C-2</p> <table border="1"><tr><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td><td>CRITERION 3: The syllabus should include a minimum of two substantial writing or speaking tasks, other than or in addition to in-class essay exams</td><td>Course Syllabus</td></tr><tr><td colspan="4"><p>1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements</p><p>2. Also:</p><p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-3".</p></td></tr></table>				<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 3: The syllabus should include a minimum of two substantial writing or speaking tasks, other than or in addition to in-class essay exams	Course Syllabus	<p>1. Please provide relatively detailed descriptions of two or more substantial writing or speaking tasks that are included in the course requirements</p> <p>2. Also:</p> <p>Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-3".</p>			
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ASU - [L] CRITERIA			
YES	NO		Identify Documentation Submitted
<input checked="" type="checkbox"/>	<input type="checkbox"/>	CRITERION 4: These substantial writing or speaking assignments should be arranged so that the students will get timely feedback from the instructor on each assignment in time to help them do better on subsequent assignments. <i>Intervention at earlier stages in the writing process is especially welcomed</i>	Course Syllabus
1. Please describe the sequence of course assignments--and the nature of the feedback the current (or most recent) course instructor provides to help students do better on subsequent assignments			
2. Also: Please circle, underline, or otherwise mark the information presented in the most recent course syllabus (or other material you have submitted) that verifies this description of the grading process--and label this information "C-4".			C-4

Literacy and Critical Inquiry [L]
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Course Prefix	Number	Title	Designation
IEE	486	Senior Design Capstone 2	L

Explain in detail which student activities correspond to the **specific** designation criteria.
Please use the following organizer to explain how the criteria are being met.

Criteria (from checksheet)	How course meets spirit (contextualize specific examples in next column)	Please provide detailed evidence of how course meets criteria (i.e., where in syllabus)
1. At least 50 percent of the grade in the course depends on writing	585 of the total 786 points for the course are for written assignments	Written assignments include: elevator speech, weekly activity sheets, Paper on selection of five habits from Carlson, final Carlson paper, summary of exit review, summary paper of individual role in capstone project, team rules, team meeting minutes, three progress reports and a final written report..
2. The composition tasks involve the gathering, interpretation, and evaluation of evidence	Through the Carlson Log Report Paper, the three progress reports, and the final report	For the Carlson Log Report, the students must keep track of how many times they violate one of their chosen rules. A weekly commentary and an end of semester analysis and summary of their work is required. In the senior design capstone projects, each team must set goals with metrics. The team is responsible for gathering data to show the as is situation, analyze and evaluate it, as well as to collect data at the end of the project, to analyze and evaluate it to show what has been accomplished.
3. The syllabus should include a minimum of two substantial writing or speaking tasks, other than or in addition to in-class essay exams.	There is an in-class essay exam plus three progress reports and a final report.	An in-class essay exam, which also serves as an ABET check, counts 80 points in the class total. The first progress report and the final report are the most substantial reports that the students will write.

<p>4. These substantial writing or speaking assignments should be arranged so that the students will get timely feedback from the instructor on each assignment in time to help them do better on subsequent assignments</p> <p>This information should be in box two in this row:</p> <p>Syllabus states that assignments will be passed back before a dependent assignment is due.</p> <p>This information should be in box 3 of this row:</p> <p>Students are given grade and feed back on progress report 1 before report 2 is due. They are given feedback on report 2 before report 3 is due. They are given feedback on report 3 before the final report is due. The students also receive feedback on the first Carlson paper before the second Carlson paper is due.</p>		
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IEE 486 Systems Design Capstone II

Course Syllabus

Instructor: Dr. Mary R. Anderson-Rowland, 480-720-0000, mary.anderson@asu.edu

Office Hours: TBD

Class Meeting: TBD

Teaching Assistant:

TA Office Hours:

Textbook: *Don't Sweat the Small Stuff At Work*

– Richard Carlson, available used on-line for about \$5

Optional References: TBD

Prerequisites: Must be a senior Engineering BS/BSE student and have completed ENG 101, IEE 475 or IEE 477, and have completed with a grade of C or better IEE 376 or IEE 476.

Course Description: This class, IEE 486, is the second of a two semester senior capstone project course; the first class is IEE 485. In IEE 486, students will execute the capstone project that they planned in IEE 485.

Learning Objectives: Upon completing IEE 486, students will understand the requirements for working well in a team, working with management and employees, designing alternative solutions, selecting a best alternative, writing project communications including three progress reports and a final report, giving oral presentations, and possibly handling project focus changes.

Topics: The following topics will be covered:

- Academic honesty, plagiarism (throughout the semester)
- Effective presentations, elevator speech (one week)
- DMAIC review, team rules (one week)
- Revised proposal (one week)
- Process improvement(~one week)
- Oral/Written Progress Report1 (~two weeks)
- Oral/Written Progress Report 2 (~three weeks)
- Oral/Written Progress Report 3 (~three weeks)
- Exit Survey Review (½ week)
- Oral/written Final Presentations (~two weeks)

Readings, Special Materials, Required Activities, Assignments, and Quizzes

Classes will consist of lecturing, active learning exercises, discussions, and presentations.

Assignments and class schedule will be posted on Blackboard. Completed assignments will be posted to Blackboard. Students are expected to put in at least 10 hours of work each week. This time includes both class time and time spent at the project site. Approximately 40% of the class

meetings are “Team Days” for the teams to work on their project either at the project site or otherwise.

Students will already be divided into teams. Each team will have produced a Project Scope document, detailed Work Breakdown Structure and dictionary, Project Schedule Baseline in Microsoft Project, Project Budget Baseline, Project Risk Management Plan, and a Monitor and Control Plan for the project once it gets started during the prerequisite class IEE 485.

Each team will give oral presentation and written reports for their revised (if necessary) project proposal, three progress reports, and the final report; each team member must participate in the presentation and give their fair share of the presentation. Mentors for the projects (primarily industrial) are invited to the final presentations where the students will also provide the final documented project plan to their mentors. Each written assignment will be graded and feedback given to the student before another assignment depending on that work is due.

Each individual student will write a report explaining their role in the team and evaluate the performance and contribution of each of their team members. Final project grades of each student will depend heavily on the results of their team members’ peer reviews.

The course grade will be determined on the basis of cumulative numeric scores. The elements for these scores are shown below. Late homework will be discounted. Late assignments turned in within a week of the due date may be docked up to one-third its value and within two weeks, two-thirds of its value. After that the assignment counts zero.

The final grades will be based on a “standard” 90-80-70 percent structure. ($\geq 90\% = A$)

Individual Class Points	POINTS
Elevator Speech Oral/Written	5
Academic Integrity Policy	5
Plagiarism Certificate	5
Class Attendance (18 days, 17@ 3 points per class day)	51
Activity Sheets due each Monday for the prior week	50
Carlson “Work Problems” paper	50
Carlson Log Report paper	50
Summary paper of Exit Survey Exam review	10
Summary paper of Individual Role in Capstone Project	50
Final Project Attendance	10
Exit Survey Exam	<u>80</u>

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Team Project Components and Points

Team Rules	25
Team Meeting Minutes (1/week)	45
Revised Proposal Oral/Written	50
Progress Reports Oral/Written (3@ 50 points)	150
Final Report – Oral Presentation	50
Final Report – Written	<u>100</u>

420 **786 total points**

Classroom Behavior

Cell phones must be turned off during class to avoid causing distractions. Laptops must also be turned off during class with the exception of dates when laptops are required for the classroom exercise or training. The use of recording devices is not permitted during class. Any violent or threatening conduct by an ASU student in this class will be reported to the SU Police Department and the Office of the Dean of Students.

Absence & Make-up Policies

Accommodations will be made for religious observances provided that students notify the instructor at the beginning of the semester concerning those dates. Students who expect to miss class due to officially university-sanctioned activities should inform the instructor early in the semester. Alternative arrangements will generally be made for any examinations and other graded in-class work affected by such absences. [Note: The preceding policies are based on ACD 304-04, "Accommodation for Religious Practices" and ACD 304-02, "Missed Classes Due to University-Sanctioned Activities."]

Academic Integrity

All students in this class are subject to ASU's Academic Integrity Policy (available at <http://provost.asu.edu/academicintegrity>) and should acquaint themselves with its content and requirements, including a strict prohibition against plagiarism. All violations will be reported to the Dean's Office, who maintains records of all offenses.

Disability Accommodations

Suitable accommodations will be made for students having disabilities and students should notify the instructor as early as possible if they will require the same. Such students must be registered with the Disability Resource Center and provide documentation to that effect.

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